

Figure 1: Evacuated Gas Sampling Pneumatic System (version 1) which resulted in fast signal rise kinetics and a relatively slow recovery time

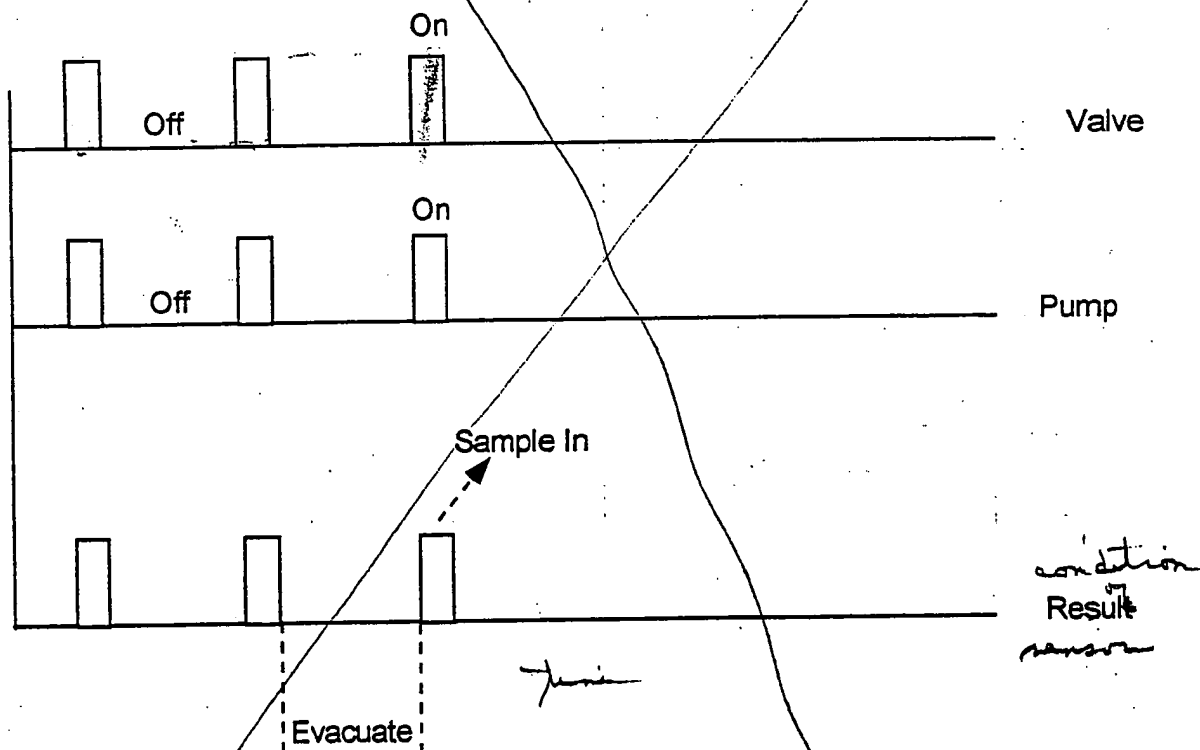
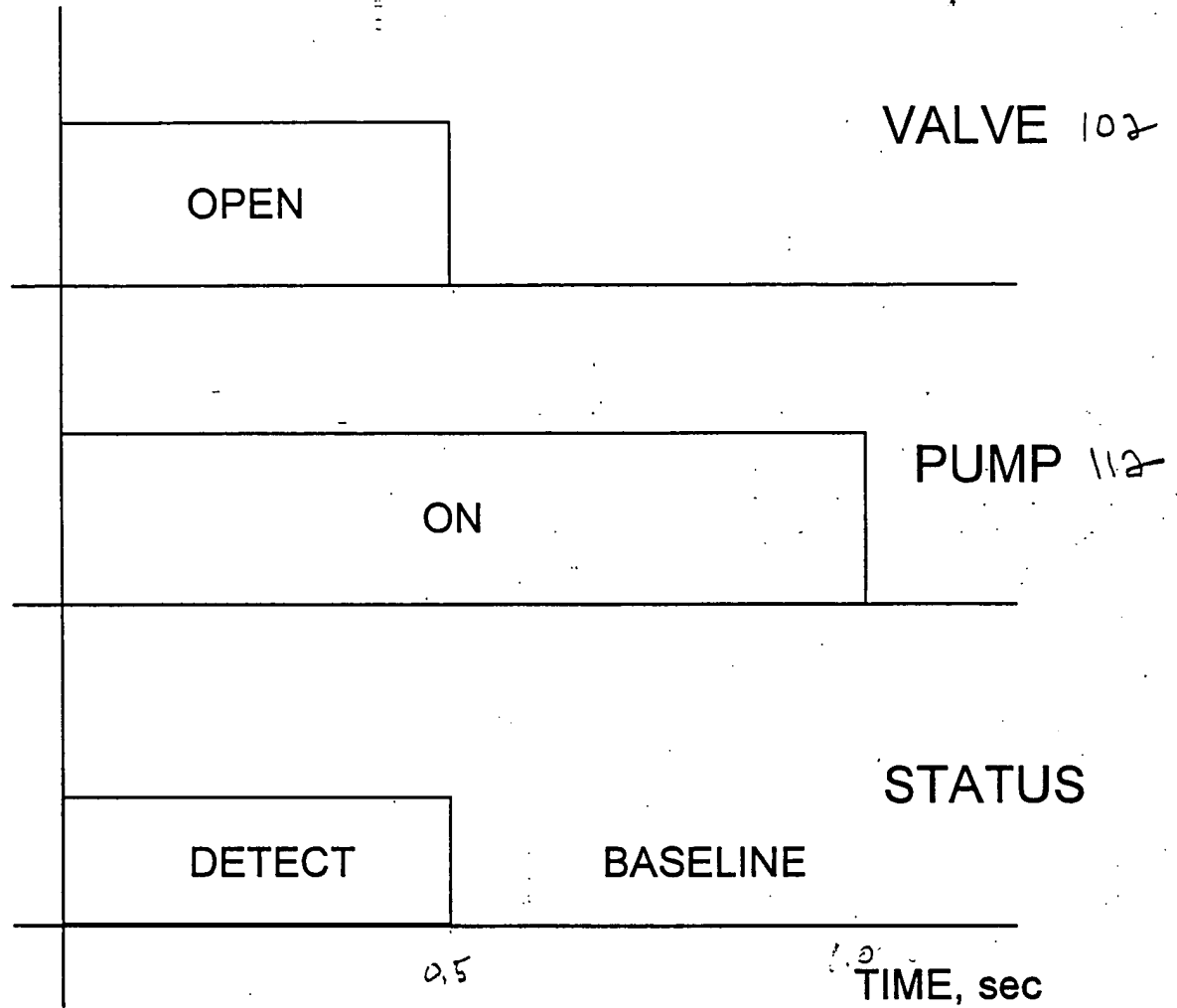


Figure 2: Gas sampling/Detect Timing Diagram of Pneumatic System

Fig. 2



Handwritten note: pump is always on

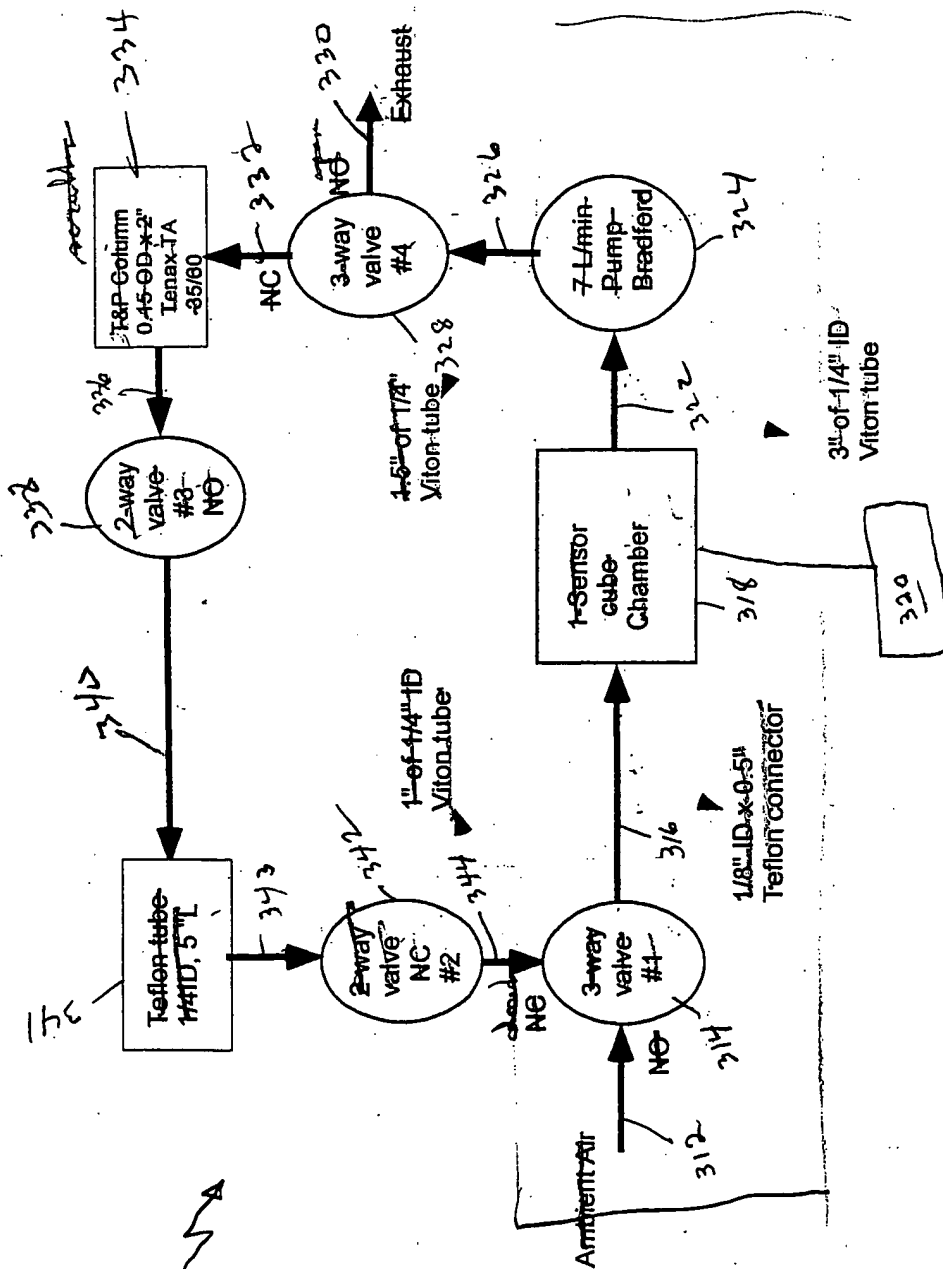


Figure 3: Improved Fluid Evacuated Gas Sampling Pneumatic System which results in rapid signal kinetics during and after vapor exposure

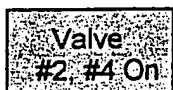
Valve #1 and
Pump (max Flow rate) on



Partial
evacuation

400

Valve
#2, #4 On



Complete
Evacuation

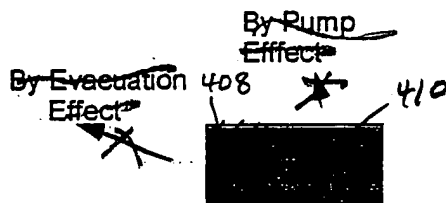
402

Valve #1 and
Pump (max Flow rate) on



Prior
Sampling

404



Sampling

406

Time (Sec)

0 5 10 15 20

Figure 3. Gas Sampling/Detect Timing Diagram of pneumatic system II

from Fig. 4 and ambient

4

Combination of high-flow and Vacuum

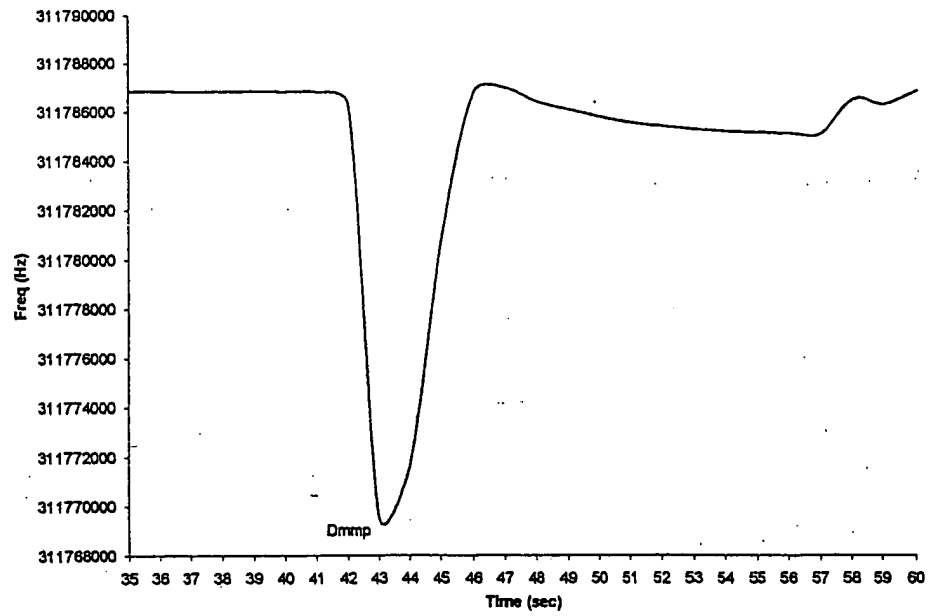


Figure 6 SAW Sensor Response Showing Fast Signal Response & Recovery Kinetics By Incorporating Pressure Modulated Pneumatics & Flow Through Furging

Vacuum-effect

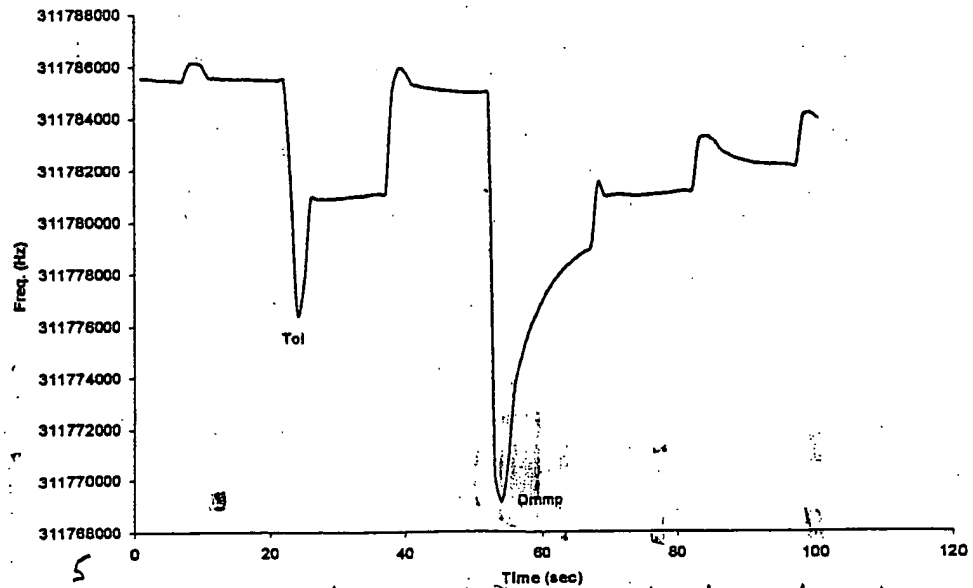


Figure 5 SAW Sensor Response Showing Fast Signal Response & Flow Recovery Kinetics By Incorporating Pressure Modulated Pneumatics Described In Figure 2